

MASSACHUSETTS MOSQUITO CONTROL ANNUAL OPERATIONS REPORT



2007 Year of Report

Date of Report: 01/28/2008

Project/District Name: **Cape Cod Mosquito Control Project**

Address: 86 WILLOW STREET

City/Town: YARMOUTH PORT

Zip: 02675

Phone: 508 775 1510

Fax: 508 362 7917

E-mail: CCMCP@CAPE.COM

Report prepared by: Gabrielle Sakolsky, Assistant Superintendent and Margaret A. Laber, Administrative Assistant

If you have a mission statement, please include it here:

ORGANIZATION SETUP:

Please list your staffing levels for the year of this report:

Full time: 23

Part time: 1

Seasonal: 1

Other: (please describe)

Please break these down into the following areas:

Administrative staff: 3

Field staff: 20

Please check off all that apply, and list employee name(s) next to each category:

☒ Public relations John W. Doane, Superintendent, Gabrielle Sakolsky, Assistant Superintendent

☐ Information technology

☒ Entomologist Gabrielle Sakolsky

☐ Wetland Scientist

☐ Biologist

☒ Education Gabrielle Sakolsky

☒ Laboratory Gabrielle Sakolsky

☒ Operations John W. Doane

☒ Facilities Bart Morris

☐ Other (please list)

For the year of this report, we maintained:

16 vehicles

2 modified wetland equipment (list type) piston bulley with rotary ditcher & low ground pressure excavator

0 ULV sprayers (list type)

Larval control equipment (list type) 16 four gallon electric backpack sprayers

Other (please be specific):

Comments: Cape Cod Mosquito Control Project is overseen by five commissioners one of these is appointed by the Cape Cod Selectmen and Town Councilors Association and one is appointed by the Cape Cod Municipal Managers Association.

INTEGRATED PEST MANAGEMENT (IPM):

Definition TBD

Please check off all of the services that you currently provide to your member cities and towns as part of your IPM program; details of these services are in the next sections.

- ☒ Larval mosquito control
- ☐ Adult mosquito control
- ☒ Source reduction
- ☒ Ditch maintenance
- ☐ Open Marsh Water Management
- ☒ Adult mosquito surveillance
- ☒ Education, Outreach & Public education
- ☒ Research
- ☐ Other (please list):

Comments: _____

LARVAL MOSQUITO CONTROL:

Do you have a larval mosquito suppression program? Yes

If yes, please describe the purpose of this program: The purpose of this program is to manage mosquito populations in Barnstable County below the nuisance level and to protect public health.

Please give the time frame for this program: April through October

Describe the areas that this program is used: All fresh water & salt water areas found to contain mosquito larvae.

Do you use:

☒ **Ground applied (includes hand, portable and/or backpack)**

☐ **Helicopter applications**

☐ **Other (please list):**

Comments: _____

What products do you use in – (please use product name and EPA#)

Wetlands: Aquabac XT #62637-1, Aquabac G #62637-3, GB1111#8898-16, Agnique MMF#53263-28

Catch basins: Altosid WSP#2724-448, Vectolex WSP#73049-20

Containers: Altosid WSP#2724-448

Other (please list):

Please list the rates of application for the areas listed above:

Wetlands: AquabacXT is 0.5 to 1 pint per acre, AquabacG is 2.5 to 10 pounds per acre, GB1111 is 2 to 3 gallons per acre, Agnique MMF 0.2 to 1 gallon per acre

Catch basins: Altosid WSP is 1 seven gram packet per basin, Vectolex WSP is 1 ten gram packet per basin

Containers: Altosid WSP 1 packet per 135 ft of surface area

Other:

Comments: _____

ADULT MOSQUITO CONTROL:

Do you have an adult mosquito suppression program? No

If yes, please describe the purpose of this program:

Please give the time frame for this program:

Describe the areas that this program is used:

Do you use:

☐ **Truck applications**

☐ **Portable applications**

☐ **Aerial applications**

☐ **Other (please list):**

Comments: _____

Please list the names of the products used with EPA #:

1).

2).

3).

4).

Please list your application rates for each product:

- 1).
- 2).
- 3).
- 4).

Please describe the maximum amounts or frequency used in a particular time frame such as season and areas

Comments: _____

SOURCE REDUCTION

Do you perform source reduction methods such as tire/container removal? Yes

If yes, please describe your program: We educate home and business owners to remove any containers on their property that would create larval habitat for mosquitos.

Comments: _____

DITCH MAINTENANCE

Do you have a ditch maintenance program? Yes

Please check all that apply:

- ☒ Inland/freshwater
- ☒ Saltmarsh

If yes, please describe: We remove obstructions in dtiches that prevent water from flowing

Please check off all that apply INLAND DITCH MAINTENANCE:

- ☒ Hand tools
- ☒ Mechanized equipment
- ☐ Other (please list):

Comments: _____

Please check off all that apply SALTMARSH DITCH MAINTENANCE:

- ☒ Hand cleaning

☒ **Mechanized cleaning**

☐ **Other (please list):**

Comments: _____

Please give an estimate of cumulative length of ditches maintained from the list above
INLAND:

Hand cleaning 25,046 feet

Mechanized cleaning 1,000 feet

Other (please list):

Comments: _____

Please give an estimate of cumulative length of ditches maintained from the list above
SALTMARSH:

Hand cleaning 28,966 feet

Mechanized cleaning 1,200 feet

Other (please list):

Comments: _____

OPEN MARSH WATER MANAGEMENT

Do you have an OMWM program? No

If yes, please describe:

Please give an estimate of total square feet or acreage:

Comments: _____

ADULT MOSQUITO SURVEILLANCE

Do you have an adult mosquito surveillance program? Yes

Please check off all that apply:

☒ Gravid traps

☒ Resting boxes

☒ CDC light traps

☒ CDC light traps w/CO₂

☐ ABC light traps

☐ ABC light traps w/CO₂

☐ NJ light traps

☐ Canopy

☐ Canopy

☐ Canopy

☐ Canopy

☐ Canopy

☐ NJ light traps w/CO₂

☐ Canopy

Other (please describe): Bioquip EVS light traps used with carbon dioxide

Please describe the purpose of this program: To sample adult mosquito populations to assess efficacy of our larval control project and monitor for the presence of arbovirus

Do you maintain long-term trap sites in any of your areas? Yes

If yes, please describe how you chose these long-term sites. Long term sites for resting boxes were chosen based on the presence of *Culiseta melanura* and roosting bird populations. Gravid traps are placed in locations where there are high *Culex* populations or where crows congregate as a sentinel. Long term light trap locations are placed in a variety of habitats to target certain mosquitoes of concern. This includes control sites where larviciding is not permitted.

Please check off the species of concern in your service area:

☐ *Ae. albopictus*

☐ *Ae. cinereus*

☐ *Ae. vexans*

☐ *An. punctipennis*

☐ *An. quadrimaculatus*

☒ *Cq. perturbans*

☒ *Cx. pipiens*

☒ *Cx. restuans*

☒ *Cx. salinarius*

☒ *Cs. melanura*

☐ *Cs. morsitans*

☒ *Oc. abserratus*

☒ *Oc. canadensis*

☒ *Oc. cantator*

☒ *Oc. excrucians*

☐ *Oc. fitchii*

☒ *Oc. j. japonicus*

☐ *Oc. punctor*

☒ *Oc. sollicitans*

☐ *Oc. stimulans*

☐ *Oc. taeniorhynchus*

☐ *Oc. triseriatus*

☐ *Oc. trivittatus*

☐ *Ps. ferox*

☐ *Ur. sapphirina*

☐ Other (please list):

Do you participate in the MDPH Arboviral Surveillance program? Yes

How many pools do you submit weekly on average? 20

Please check off the arboviruses found in your area in the past 5 years:

☒ West Nile Virus

☒ Eastern Equine Encephalitis

☐ Other Please list:

Did the above listed diseases cause human or horse illnesses? Yes

Please explain: one human case of WNV in Marston Mills Village, Barnstable, MA

At what arbovirus risk level did the year begin in your area? (If more than one please list)

WNV: remote to moderate

EEE: remote

At what arbovirus risk level did the year end in your area? (If more than one please list)

WNV: low to high

EEE: remote

Comments: _____

EDUCATION, OUTREACH & PUBLIC RELATIONS

Do you have an education/public outreach program? Yes

If yes, please describe: We present educational programs to a variety of organizations in Barnstable County. Our field crews hand out informational pamphlets to homeowners.

Please check off all that apply:

- ☒ School based program
- ☐ Website
- ☒ PR brochures/handouts
- ☒ Community events
- ☐ Other (please describe):

Please give an estimate of attendance/participants in this program: 1200

Please list some events you participated in for the year of this report: Cape Cod Natural History Conference, Barnstable County Public Works Association's monthly meeting, Massachusetts Audubon Society Wellfleet Bay Adult Education, Barnstable County Beekeepers Association meeting, Cape Cod Selectmen & Councilors Association monthly meeting.

Please list training events your staff attended: Northeastern Mosquito Control Assoc. meeting, Barnstable county lyme disease avoidance training, GIS training through True North Mapping; inhouse msds and label reviews

Comments: _____

BIOLOGICAL CONTROL EFFORTS

Do you have a biological control program? Yes

If yes, please describe: We perform selective ditch maintenance to allow predatory fish access to stagnant pools. We also use bacterial larvacides such as BTI in our program.

Is this program the introduction of mosquito predators or the enhancement of habitat for native predators? Enhancement of habitat for native predators and introduction of natural pathogens to control mosquito populations

Please check off all that apply:

- ☒ Predatory fish
- ☐ Predatory invertebrates
- ☒ Other (please describe): *Bacillus thuringiensis israelensis* and *Bacillus sphaericus*

Comments: _____

INFORMATION TECHNOLOGY

Does your program use (check all that apply):

- ☒ Computers
- ☒ GIS mapping
- ☒ GPS equipment
- ☒ Computer databases
- ☒ Aerial Photography
- ☐ Other (please describe):

Please describe your capabilities in these areas: We have a Trimble GPS unit that we use to record trap sites, location of pipes, etc. Access Computer databases are used to record all work completed as well as all trap information. We have historical aerial photographs as well as Mass GIS orthos.

Please describe your current GIS abilities: Intermediate

Give details if possible on your GIS abilities: We are currently using Mass GIS with ARC GIS 9 viewer. We have added a layer to the MASS GIS maps showing the unique numbers for each of our work sites. All work is entered into an Access data base that is connected to the maps.

Comments: Information technology has been added to our employees work responsibilities. Any advanced technology beyond our employees capabilities is contracted to True North Mapping.

REVENUES & EXPENDITURES

Please give a concise statement of revenues & expenditures for the prior fiscal year ending June 30.

For Fiscal Year 2007, revenue totalled \$1,409,016.00 from all 15 towns in Barnstable County. Expenditures were as follows: AA payroll account was \$933,917.00; FF Account, for repair and supplies was \$71,330.00; DD account which is our benefits(insurance,retirement, etc.) totalled \$318,009.00; EE account for office supplies, \$18,000.00; GG Account, utilities and gasoline \$60,250.00; BB employee reimbursement \$1,000.00; CC, commissioners pay & travel \$6,510.00.

Comments: _____

PESTICIDE USAGE

Please total your pesticide usage with information from your Mass. Pesticide Use Report, WNV Larvicide Use records and contracted pesticide applications. Applications methods include; hand/backpack, aerial, ULV, mistblower, other (please explain)

Product Name: Agnique MMF
EPA Reg. #: 53263-28
Application method: hand sprayer
Targeted life stage: Larvae/pupae
Total amount of concentrate applied: 6 gallons
Comments: 32% active ingredient ; 18 applications to 14 sites

Product Name: Aquabac G
EPA Reg. #: 62637-3
Application method: hand
Targeted life stage: Larvae
Total amount of concentrate applied: 2,030
Comments: 2.8% active ingredient; 254 applications to 137 sites

Product Name: Aquabac XT
EPA Reg. #: 62637-1
Application method: hand/backpack sprayer
Targeted life stage: Larvae
Total amount of concentrate applied: 320 gallons
Comments: 8% active ingredient; 2,041 applications to 1,051 sites

Product Name: GB1111
EPA Reg. #: 8898-16

Application method: hand sprayer
Targeted life stage: Larvae/pupae
Total amount of concentrate applied: 600 gallons
Comments: 98.7% active ingredient; 789 applications to 531 sites

Product Name: Altosid WSP
EPA Reg. #: 2724-448
Application method: hand
Targeted life stage: Larvae
Total amount of concentrate applied: 113 pounds
Comments: 4.25% active ingredient; 7,746 road drains & containers treated

Product Name: Vectolex WSP
EPA Reg. #: 73049-20
Application method: hand
Targeted life stage: Choose one
Total amount of concentrate applied: 180 pounds
Comments: 7.5% active ingredient; 8,182 road drains treated

Product Name:
EPA Reg. #:
Application method:
Targeted life stage: Choose one
Total amount of concentrate applied:
Comments: _____

Product Name:
EPA Reg. #:
Application method:
Targeted life stage: Choose one
Total amount of concentrate applied:
Comments: _____

Product Name:
EPA Reg. #:
Application method:
Targeted life stage: Choose one
Total amount of concentrate applied:
Comments: _____

LARGE AREA EXCLUSIONS

Do you have large areas of pesticide exclusion, such as estimated or priority habitats?
Yes

If yes, please explain, and include maps if possible. We are limited in our applications within the boundaries of Cape Cod National Seashore

SPECIAL PROJECTS

Do you perform any inspectional services such as inspections at sewage treatment facilities or review sub division plans? No

If yes, please elaborate

Do you work with DPW departments or other local or state officials to address stormwater systems, clogged culverts or other areas that you have identified as man-made mosquito problem areas? Yes

If yes, please elaborate: If we are contacted by local or state officials about clogged stormwater systems, clogged culverts or other areas that create larval habitat we address the problem through water management or larvicide treatment.

Have you worked with these departments on long term solutions? Yes

CHILDREN AND FAMILIES PROTECTION ACT

Is your program impacted by the Children and Families Protection Act? Yes

If yes, please explain: all schools located in Barnstable County were required to add our larvicide products to their outdoor IPM plan.

If you have data on compliance with this Act and your program, please list here: All public schools , private schools and parochial schools have notified us.

If you had difficulties with implementation of your program due to this law, please elaborate here: no

GENERAL COMMENTS

Please list any comments or concerns not covered in this report: Cape Cod Mosquito Control Project is a partner under the EPA's Pesticide Environmental Stewardship Program under the auspices of the American Mosquito Control Association. Cape Cod Mosquito Control Project works closely with town boards of health, town conservation commissions and occasionally with the county board of health, as well as working with local citizens who have mosquito concerns.

